

# HUDSON RIVER SIDEWHEELERS

An account of seven Hudson River boats,  
representative of the development of the  
steamboat, and of the models of these boats

on permanent exhibit at

NATIONAL COMMERCIAL BANK  
AND TRUST COMPANY

ATHENS OFFICE

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CLERMONT

Built 1807 Withdrawn from service 1815

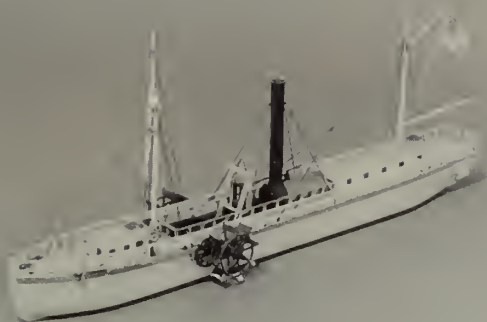
It wasn't the first steamboat, but nonetheless, a real pioneer . . .  
and best known

Robert Fulton's Clermont was, of course, the first steamboat . . . and the only trouble with that statement is that it's not true. Sixteen American steamboats had preceded his, but the fact that when launched she was called merely "The Steamboat" attests amply to her uniqueness as of that particular day. No part of it was the invention of Fulton. Through his superb adaption of component parts, however, to practical purposes he contributed irreplaceably to the steamboat's success. For example, the location of the machinery in the hull so the vessel would float was a triumph in itself.

Launched in the spring of 1807, "The Steamboat" was fitted out in the next several months. She was now called the Clermont, but it seems likely that name never appeared on the hull. By August, she was ready for the trip upriver to Albany, and she pulled away from her New York wharf with fifty adventurous passengers aboard. Her paddlewheels churned noisily and clouds of smoke and sparks belched from her stack; needless to say, she caused a sensation all along the river.

Her average speed was close to five miles an hour, and as Fulton reported, when she overtook sloops she "parted from them as if they had been at anchor." To cover the 150 miles, 32 hours were needed going upstream and 30 hours on the return, with a light breeze against her each way.

Soon the paddlewheels were covered over, and the small cabins were fitted with berths. The boat went on regular schedule, and passengers paid \$7 for the New York-to-Albany trip, with intermediate rates for landings en route.



This voyage which the Clermont could do in 30 hours required three days to a week for sailing vessels. Captains of other vessels, realizing the deadliness of the competition, often tried to damage the Clermont by ramming it. The vulnerable paddlewheels were a particular target; finally, the Legislature was prevailed upon to impose severe penalties for anyone who tried these tactics.

In her second year, the Clermont was entirely rebuilt and at that time she was redocumented as the North River (though still more commonly referred to as the Clermont). She operated for seven more years before Fulton's improved steamboats (the Paragon, Car of Neptune, and Richmond) made her obsolete. As such, she was removed from service in 1815.

Detail: Length, 150 feet; beam, 16 feet at deck; depth, 7 feet; draft, 2 feet 4 inches. Original tonnage, 78.

Bell crank engine (Bolton & Watts, England); 24-inch cylinder with 4-foot stroke. 4400-pound copper boiler encased in brick.

Paddlewheels: 15 feet in diameter, each with 8 buckets with four-foot face and two-foot dip.

# SWALLOW

Built 1836 Sank 1845

The speed that marked her brief life brought it to a sudden end one night . . .

Built in New York City, the Swallow made her first appearance as a nightboat on the New York-to-Albany run in the spring of that year. She was 226 feet in length, but after the first season of operation, she was lengthened by 30 feet and her cylinder diameter was increased by six inches to step up her speed and power.

The Swallow, in her short career, was noted for the races in which she engaged with numerous other vessels of similar size and speed — but particularly with the Rochester. The latter vessel vied for speed honors against the Swallow repeatedly, and modifications were made on each boat from time to time to attain some slight advantage over the well-matched rival. And it was this rivalry that was responsible for the Swallow's destruction on the night of April 7, 1845.

Crowded with 300 passengers — many of whom had bought tickets to their doom — the Swallow left Albany for New York City at 6 o'clock. It was a tempestuous night, unusually dark and cold for April. A heavy gale was in progress, with snow squalls obscuring the usual landmarks familiar to rivermen. Following the Swallow were the Rochester and the Express; each of the three, that night, were considered the epitome of elegance, comfort, speed, and safety — the forerunners of the great "Palace Steamers" that were to follow.

After passing the Four Mile Point light and upon nearing the village of Athens, 26 miles below Albany, the second pilot, at the wheel, became confused in his bearings as the vessel entered the Athens west channel. Swallow struck Dooper's Island head-on with a shattering crash heard a mile away. The impact forced the bow onto the rocky island at a 30-degree angle. Swallow's back broke and the stern began to settle; boiler furnaces were flooded immediately, and sheets of steam, smoke, and flame, shot upward. The fire spread rapidly, but was soon extinguished as the stern sank, with only its hurricane remaining above water. Appalling darkness again enveloped the scene.



Passengers barely had time to leap from their berths before the water was upon them. A few escaped to the bow and dropped to the rocks below. The river was dotted with people swimming and splashing, unable to see the shore only a few rods distant. The people of Athens hurried out, and with small boats helped to rescue many. The Express and Rochester came up and with skillful maneuvering managed to save 134 passengers between them.

The loss of life was estimated at 40, although it was impossible to be exact, because no passenger records were kept. The Swallow's engine ended up in a Troy steel mill, and the rest of the wreck was dismantled. Ira Buckman, who bought the wreckage, salvaged much of the remaining superstructure and planking — including the spiral staircase leading to the main saloon. All this he ferried across the river and hauled it seven miles inland to Valatie; there he built the "Swallow House," which even today is a reminder of days long ago.

And Dooper's Island? It is no more; thirty years later, the entire rock was blasted away. In any event, if the Swallow had struck 50 feet distant in either direction, she would have plowed harmlessly into mud flats.

Detail: Wood hull. 426 tons. Length, 226 feet; beam, 22 feet, 6 inches; depth, 8 feet, 6 inches. (Lengthened in 1837 to 256 feet.)

Vertical beam engine (West Point Foundry); 46- inch cylinder with 10-foot stroke. (Cylinder diameter increased to 52 inches.)

Paddlewheels: 24 feet in diameter; face of 11 feet; turning at 24 rpm.

## NORWICH (the 'Ice King')

Built 1836    Dismantled 1923

This 'unsinkable' old work horse served 74 doughty years on the Hudson River

Built for the New York and Norwich Steamboat Co. for Long Island Sound service, the Norwich remained on that run (and, briefly, on the Chesapeake between Baltimore and Norfolk) for several years — a lifetime of service for many a less sturdy and staunch vessel — before coming to the Hudson in 1843.

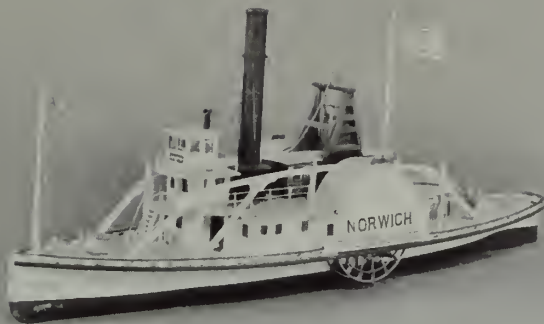
In that year she was put on the Roundout-New York City run for passengers and freight; five years and three owners later, she was converted into a towboat. And it was at about this same time that the Norwich began to earn her reputation as the "Ice King," a title that never was disputed.

The Norwich's 346 tons in a 160-foot length gave her a construction that enabled her to break through even the heaviest river ice. Her bottom was well protected by copper and steel plates, and her paddlewheels were fashioned of iron and live oak.

To break through an ice field, the Norwich would literally climb onto the ice and allow the weight of her bow to break through. Occasionally, when she was battling large mounds of heavy ice, the Norwich would be turned on her side, and her crew would spring into frenzied action, shifting chain boxes and other ballast to right her.

Norwich was the last steamboat in operation when winter came every year, and the first to brave the ice in early spring. As she battled her way along the Hudson, she freed ice-bound steamers and — in breaking up ice jams — saved the upper Hudson area from much damage by flooding which the ice gorges would have caused.

Norwich had at least her share of mishaps. The earliest was in June, 1848, when her boiler burst opposite 60th Street in the North River; she returned to service soon after. In June, 1877, she collided with the Hudson's largest steamboat, the St. John, and lost about 20 feet of her guard.



In November, 1882, much damage resulted when her engine's crosshead broke as she steamed up the river with 30 barges in tow near Piermont. Her most serious misadventure was in December, 1906, when she caught fire in Roundout Creek, and firemen poured in so much water that she sank. She stayed on the bottom until spring, but by April she was raised and went back into service at the age of 71. She burned again in 1909 (while being refurbished to steam in the Hudson-Fulton celebration). Then in March, 1917, she sank in shoal water in Roundout Creek, but by July she was again in service. It proved to be, however, her final season. Laid up at Port Ewen, she filled and sank there in the fall of 1923, and after 87 years' faithful service she finally was dismantled.

When Norwich steamed along behind replicas of the Half Moon and Clermont for the Hudson-Fulton Celebration, her paddleboxes proudly bore the legend: "Oldest Steamboat in the World." In her final season, she was the last, but one, of all sidewheel steamboats on the Hudson. Not quite unsinkable in fact, she was very much so in spirit, this "Molly Brown of the Hudson."

Detail: Wood hull. 346 tons. Length, 160 feet; beam, 25 feet, 3 inches; depth, 9 feet.

Cross head engine (Cunningham and Hall); 40-inch cylinder with 19-foot stroke.

## MARY POWELL

Built 1861    Dismantled 1920

In service on the Hudson 56 years, she was perhaps the river's most popular day boat

The Mary Powell is widely regarded as the most beautifully modeled and proportioned steamboat of her class. Her lines have been described as perfect for her type of vessel, and she was a fast boat with a record of several exceptionally good runs.

Built in 1861, at the start of the Civil War, by Michael A. Allison at Jersey City for Captain Absolon Anderson, she was named for a Newburgh widow, whose husband, Thomas Powell, also had given his name to a well-known river boat.

If she was fast, she also was sturdy. One of her captains, Elting Anderson, estimated that during her 56 years' service she made some 27,000 trips. On these she would have steamed more than a million miles (1,154,000, according to his calculation), and every year for more than a half-century she carried some 150,000 passengers. Her total passenger list then would have been more than eight million people!

The Mary Powell was lengthened once from her original 267 feet; the year after her construction, 21 feet were added, with 70 tons added to her weight. She was rebuilt extensively later (though never again lengthened), and other alterations were made as late as 1904.

Among the Mary Powell's fastest runs was the one in August, 1867, when she covered the 92 miles between New York City and Roundout Creek in less than four and one-half hours — making five landings while discharging 800 passengers and taking on others. More than a quarter-century later, she clocked one of her fastest runs: New York to West Point, 50 miles in two hours and five minutes. But the best record of all was set in 1882, when the Mary Powell was timed in just one minute over an hour for a 25-mile run. For such speeds, she burned two and one-half tons of anthracite an hour.



When time came for the venerable boat to be dismantled in Roundout Creek in 1920, many people wanted souvenirs. So the gilt balls from atop her masts now adorn gateposts of the Morgan estate at Highland Falls; the steering wheel is in the Senate House Museum at Kingston; the capstan from her forward deck is in Ford's Dearborn Museum; her whistle (which later was used on the Robert Fulton) now is in the New York Historical Society's Museum in New York City.

Detail: Wood hull. 819 tons. Length, 267 feet; beam, 34 feet; depth, 9 feet. (Lengthened to 288 feet; tonnage increased to 889).

Vertical beam engine (Fletcher & Harrison); 62-inch cylinder with 12-foot stroke. (Cylinder diameter later increased to 72 inches).

Paddlewheels: 31 feet in diameter; face of 10 feet, six inches; turning at 22 rpm.

## GEORGE H. POWER

Built 1869    Condemned 1927

After 52 years on a single run between Athens and Hudson, she was the river's most familiar ferry

We usually think of a ferryboat as leading a functional and monotonous existence. This is by no means always the case, for some have varied careers that may end up hundreds of miles from their original ports and frequently under different names.

This was the fate of the most widely known Hudson River ferryboat, the George H. Power, which was destined to feel the waters of two remote bodies, the Champlain and St. Lawrence . . . and to undergo a prosaic change of name.

But all that happened only after more than a half-century of faithful service for the Power between Athens and Hudson. She was named for a merchant and steamboat owner of those two communities, and was a familiar sight to everyone on the river, with her glass-enclosed walking beam on the upper deck. Throughout the last three decades of the 19th Century and the first two decades of the 20th, the Power plodded along in the straight and narrow. Then, in 1921, at the age of 52, she was laid up at Coffin's Bay.

After a pair of sales, she was reconditioned at the Athens Drydock and then placed on the three-mile run between Essex (New York) and Charlotte (Vermont) on Lake Champlain — appropriately renamed the Charlotte-Essex.



For about five more years she operated on that crossing before being sold again, this time to Canadian interests who operated her on the St. Lawrence River for two seasons. Finally, in 1927, she was condemned . . . and today the remains of the old ferryboat rest on the banks of the river near the little village of Moya.

Detail: Wood hull. Length, 94 feet; beam, 24 feet, 6 inches; depth, 9 feet.

Vertical beam engine (Fletcher & Harrison No. 4); 37-inch cylinder with 7-foot stroke. Built in 1858, engine came from earlier ferryboat, J. T. Waterman.

## BELLE HORTON

Built 1881    Burned 1906

A favorite on the Catskill-to-Albany run, she was small with a graceful appearance

Much of the Belle Horton's history involves other bodies of water . . . Long Island Sound, the Chesapeake, the James, the Potomac, and she also served for a while between Peekskill and New York, but she was built for service on the upper Hudson and was a favorite in this area for many years.

Belle Horton — only about half the length of the Mary Powell, for instance, and smaller even than Fulton's Clermont — was built at Athens by Van Loon and Magee. She was commissioned by the Citizens' Line of Troy to succeed the Golden Gate, which had burned in 1880 at the Troy riverfront.

One of the most popular of the smaller sidewheelers, with fine lines and a very graceful appearance, Belle Horton adhered in her design to larger boats' outlines. For a decade and a half she was a familiar and friendly sight on the upper Hudson, and for much of this time she plied the 32 miles between Catskill and Albany, making stops at all landings en route.

Because of her trimness, Belle Horton found a useful role, too, serving as a tender for the larger night boats of the Citizens' Line. When the larger boats, such as the Saratoga and the City of Troy, had difficulty during low tides in the upper part of the river — particularly between Albany and Troy — the Belle took their passengers the final six miles through the shallow waters and narrow channels. Belle's popularity was shown additionally in her frequent chartering for excursions along this part of the river.



In 1894, Belle Horton left the upper Hudson and for the next five years was on Long Island Sound, from New York City to Norwalk and Keyport. Immediately after the Spanish-American War, she served for a couple of years between Peekskill and New York, then in 1900 left the Hudson for the last time. She worked out of Norfolk and, after being redocumented in 1903 as the Pine Beach, she ran as an excursion boat to various points on the James and Potomac rivers. It was in this service that she burned at Alexandria, Virginia, in 1906. Thus, though the Belle was the latest sidewheeler built (among this collection of models), three of them from earlier years outlasted her.

Detail: Wood hull. 305 tons. Length, 135 feet; beam, 25 feet, 6 inches; depth, 7 feet, 6 inches; draft, 4 feet.

Vertical beam engine (W. & A. Fletcher); 42-inch cylinder with a 7-foot stroke.

## KNICKERBOCKER

Not a sidewheeler, but this ice barge has a rightful place in this Hudson River exhibit

Many types and sizes of ice barges worked in the Hudson's waters in the 19th Century, and this model represents one of the barges of the double-end type. It is of average size, and had a capacity of from 600 to 750 tons.

The purpose of the barge fleet, of course, was to transport ice from the many large ice houses on the upper Hudson to the markets in New York City. Their size ranged from a few hundred tons up to a thousand tons in capacity.

By far the most picturesque were those having the large conspicuous wind-mills on the upper deck: such was the Knickerbocker. Because of the nature of their cargoes, the windmills were necessary to pump the bilges dry from the slowly melting ice. They proved to be very efficient, and the upkeep was negligible.

Although there were many large ice houses, the principal companies owning houses on the upper Hudson were the Knickerbocker, American, and Mercantile ice companies. Most of the houses had a capacity of 100,000 tons, but a few could store twice that amount. The last one in this area, the Green & Bedell house a mile south of Coxsackie, lasted until the 1960's when it was destroyed by fire.



## Steam...to scale

All models in this exhibit were constructed with painstaking accuracy on a scale of one-eighth inch to each foot, so that a steamboat 100 feet in length would be represented by a model slightly over a foot long. Most steamboats were built by rule-of-thumb design; few scale drawings exist. Much of the research to enable faithful reproduction of the steamboats complete in their detail has to rely on contemporary descriptions, such as newspaper accounts of the maiden trips, and on paintings (photographs were non-existent in the days of the early steam craft). A decision also must be made as to which stage of a boat's life is to be shown, for alterations were made frequently; ordinarily, the decision is in favor of the boat as she appeared originally.

In these models, hulls are of clear pattern-maker's pine. Cabins are of one-twenty-eighth and one-sixteenth inch cherry. Masts, guard posts, hog framing, and gallows frames are of West Indian boxwood. Virtually all machinery is of brass and copper. Fittings are handmade down to the cleats and chock.

The models depicted and described here were built on commission by F. Van Loon Ryder, whose other models are on exhibit at the Smithsonian Institution, the Boston Museum of Fine Arts, in Washington's headquarters in Newburgh, and in other public and private collections.

## A salute to an era

Once a familiar and vital part of the Hudson River's life and economy, the old sidewheelers with their tall walking beams and massive machinery now are a thing of the past.

To mark their importance to the river and its people, National Commercial Bank and Trust Company commissioned the building of these seven models, and has chosen its Athens Office for their permanent location because of the early shipyards in that village and the continued interest there in the river and in all nautical affairs. Shown in the exhibit, and described in this brochure, are six sidewheelers and an ice barge.

The old steamboats cruised the river at speeds of about 20 miles an hour; on short runs, the speed sometimes was as much as 25 mph. Behind these surprising figures are the old vertical beam engines, for despite their sprawling shape and great weight, these engines were economical in operation. They have been called the most efficient engines ever developed for turning heavy wheels at slow speed.

An average-sized paddlewheeler had a cylinder diameter of 44 inches, with a 10-foot stroke. Operating on but 35 pounds steam pressure, the engine would turn the wheels at about 17 rpm. Wheels, averaging 30 feet in diameter, would have 26 buckets (or paddles), each nine feet long and two feet wide or deep — the "dip." This meant that 52 paddles struck the water with every revolution of the wheels: every minute, 884 paddles; every hour, 53,000. Little wonder that, down through the years, these old beam engines held their own against all innovations and improvements, competing with the more refined compound and triple expansion high-pressure engines.

The models shown cover a period of more than a century of Hudson River steamboating. Individually, they represent a number of different historical periods, as well as various designs, styles, and purposes. It is hoped that viewing them together will heighten appreciation of their very useful role in the development of the upper Hudson River's economy . . . as well as pleasantly recalling colorful aspects of a bygone day.

By Daniel E. Button, Executive Editor, Albany Times-Union

for

NATIONAL COMMERCIAL BANK AND TRUST COMPANY